

10763, 088

\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 10:55:21 ON 03 FEB 2007

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 10:55:33 ON 03 FEB 2007

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STRUCTURE FILE UPDATES: 2 FEB 2007 HIGHEST RN 919200-33-2

DICTIONARY FILE UPDATES: 2 FEB 2007 HIGHEST RN 919200-33-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

\*\*\* YOU HAVE NEW MAIL \*\*\*

=>

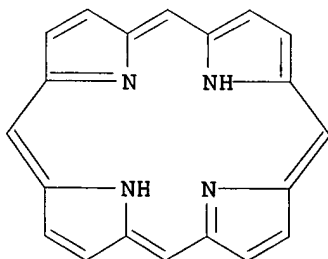
Uploading C:\Program Files\Stnexp\Queries\10763088.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:55:56 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 4848 TO ITERATE

41.3% PROCESSED

2000 ITERATIONS

50 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 92785 TO 101135  
PROJECTED ANSWERS: 23637 TO 27945

L2 50 SEA SSS SAM L1

=> s l1 full  
FULL SEARCH INITIATED 10:56:03 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 98337 TO ITERATE

100.0% PROCESSED 98337 ITERATIONS 26701 ANSWERS  
SEARCH TIME: 00.00.01

L3 26701 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 172.10 172.31

FILE 'CAPLUS' ENTERED AT 10:56:09 ON 03 FEB 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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FILE COVERS 1907 - 3 Feb 2007 VOL 146 ISS 7  
FILE LAST UPDATED: 2 Feb 2007 (20070202/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l3 and nonmetallic  
23714 L3  
20673 NONMETALLIC  
L4 11 L3 AND NONMETALLIC

=> s l4 and label?  
444598 LABEL?  
L5 1 L4 AND LABEL?

=> d l5 bib abs hitstr

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:158157 CAPLUS  
DN 120:158157  
TI Use of nonmetallic tetrapyrrole molecules and novel signal solutions in chemiluminescent reactions and assays

IN Katsilometes, George W.  
 PA Monitor Diagnostics, Inc., USA  
 SO PCT Int. Appl., 89 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	WO 9323756	A1	19931125	WO 1993-US4241	19930429
	W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5340714	A	19940823	US 1992-880714	19920508
	AU 9342343	A	19931213	AU 1993-42343	19930429
PRAI	US 1992-880714	A	19920508		
	WO 1993-US4241	A	19930429		

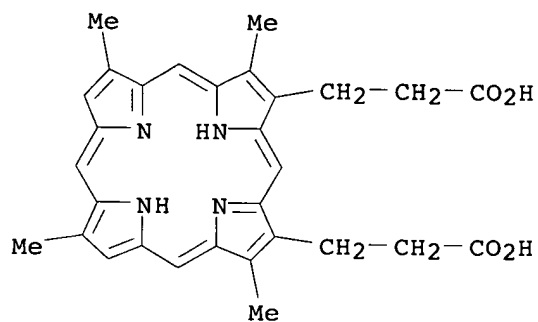
AB Nonmetallic tetrapyrrole mols. are shown to catalyze the production of light by chemiluminescence in the presence of a signal solution at a pH of .apprx.10.0-.apprx.14.0, having an appropriate oxidant or combination of oxidants and a luminescent reactant. The addition of an electron transport facilitator, a surfactant, a carbohydrate (glucose), and a chelating agent to the signal solution increases the output of light. These tetrapyrrole mols. are used alone or attached to haptens or macromols. (e.g. nucleotide probes or antibodies) and are utilized as labels in the preparation of chemiluminescent, homogeneous or heterogeneous assays. They are also used in conjunction with other chemiluminescent label mols. to produce multiple analyte chemiluminescent assays. A chemiluminescent signal solution which comprises at a pH of .apprx.10.0-.apprx.14.0 trans,trans-5-(4-nitrophenyl)-2,4-pentadienal (NPPD), sodium di-2-ethylhexyl sulfosuccinate (AOT), glucose, benzyltrimethylammonium hydroxide, cumene hydroperoxide, trisodium para periodate, potassium superoxide and EDTA with or without a luminescent reactant is also disclosed. Nonmetallic deuteroporphyrin IX•2HCl-bovine serum albumin-estradiol-17 $\beta$  conjugate was used in a chemiluminescent assay with signal solution containing NPPD, AOT, luminol, glucose, Trizma base, benzyltrimethylammonium hydroxide, cumene hydroperoxide, trisodium para periodate, potassium superoxide, and EDTA. A definite deuteroporphyrin concentration-dependent limit of detection curve was generated which demonstrated

ultrasensitive detection in the 1 + 10<sup>-19</sup> M range.

IT 68929-05-5 68929-05-5D, conjugates with antimouse antibodies and with estradiol-17 $\beta$ -bovine serum albumin conjugate  
 RL: ANST (Analytical study)  
 (in chemiluminescence assays)

RN 68929-05-5 CAPLUS

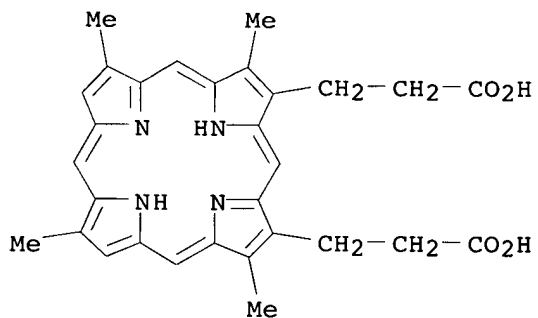
CN 21H,23H-Porphine-2,18-dipropanoic acid, 3,7,12,17-tetramethyl-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 68929-05-5 CAPLUS

CN 21H,23H-Porphine-2,18-dipropionic acid, 3,7,12,17-tetramethyl-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

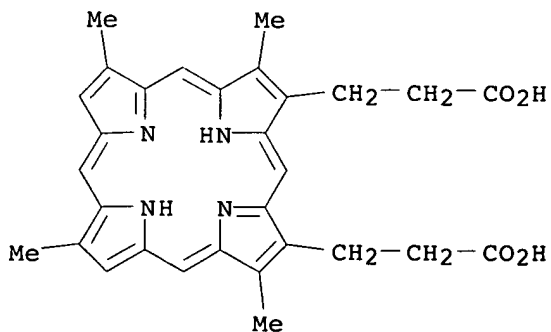
IT 448-65-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with rabbit antimouse antibodies)

RN 448-65-7 CAPLUS

CN 21H,23H-Porphine-2,18-dipropionic acid, 3,7,12,17-tetramethyl- (9CI) (CA INDEX NAME)

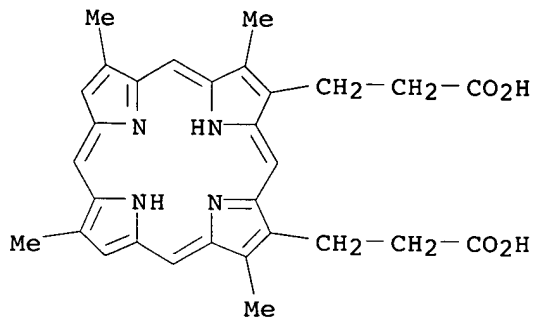


IT 153507-22-3  
 RL: ANST (Analytical study)  
 (simultaneous flashing of, in chemiluminescence assay)  
 RN 153507-22-3 CAPLUS  
 CN 21H,23H-Porphine-2,18-dipropionic acid, 3,7,12,17-tetramethyl-,  
 dihydrochloride, mixt. with 10,10'-dimethyl-9,9'-biacridinium dinitrate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 68929-05-5

CMF C30 H30 N4 O4 . 2 Cl H



● 2 HCl

CM 2

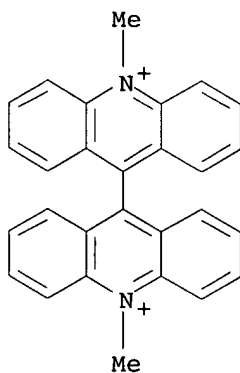
CRN 2315-97-1

CMF C28 H22 N2 . 2 N O3

CM 3

CRN 22103-92-0

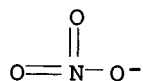
CMF C28 H22 N2



CM 4

CRN 14797-55-8

CMF N O3



=> d his

(FILE 'HOME' ENTERED AT 10:55:21 ON 03 FEB 2007)

FILE 'REGISTRY' ENTERED AT 10:55:33 ON 03 FEB 2007

L1 STRUCTURE UPLOADED

L2 50 S L1

L3 26701 S L1 FULL

FILE 'CAPLUS' ENTERED AT 10:56:09 ON 03 FEB 2007

L4 11 S L3 AND NONMETALLIC

L5 1 S L4 AND LABEL?

=> s l4 and (reactive or functional) (3a) group?

303429 REACTIVE

558367 FUNCTIONAL

2271965 GROUP?

95890 (REACTIVE OR FUNCTIONAL) (3A) GROUP?

L6 2 L4 AND (REACTIVE OR FUNCTIONAL) (3A) GROUP?

=> s l6 not l5

L7 2 L6 NOT L5

=> d l7 bib abs hitstr 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1324582 CAPLUS

DN 144:233131

TI Polyhydroxylated Sapphyrins: Multisite Non-metallic Catalysts for Activated Phosphodiester Hydrolysis

AU Kral, Vladimir; Lang, Kamil; Kralova, Jarmila; Dvorak, Michal; Martasek, Pavel; Chin, Aileen O.; Andrievsky, Andrei; Lynch, Vincent; Sessler, Jonathan L.

CS Department of Analytical Chemistry, Institute of Chemical Technology, Prague, Czech Rep.

SO Journal of the American Chemical Society (2006), 128(2), 432-437

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 144:233131

AB Enhanced hydrolysis rates for the cleavage of bis(4-nitrophenyl) phosphate (BNPP), a model phosphodiester, may be achieved by using appropriately designed ditopic receptors containing the known phosphate-binding nucleus, sapphyrin, attached covalently to suitably oriented polyhydroxyl subunits. Evidence for the interaction between sapphyrin and BNPP comes from solid-state x-ray diffraction anal. of a diprotonated dihydroxylated sapphyrin-BNPP complex and from solution-phase <sup>31</sup>P NMR spectroscopic binding studies. The sapphyrins described in this paper may have a role to play as oligonucleotide cleavage agents.

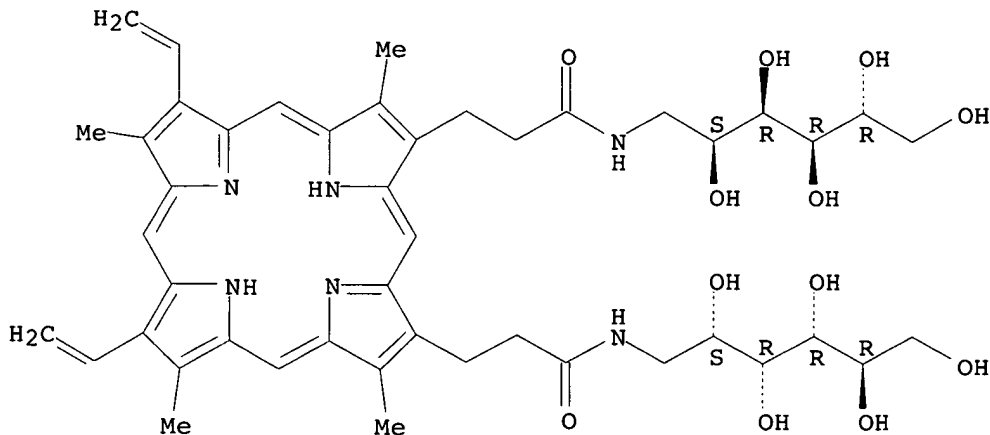
IT 876184-85-9P 876184-86-0P 876184-87-1P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation of polyhydroxylated sapphyrins as multisite nonmetallic catalysts for phosphodiester hydrolysis and kinetics of

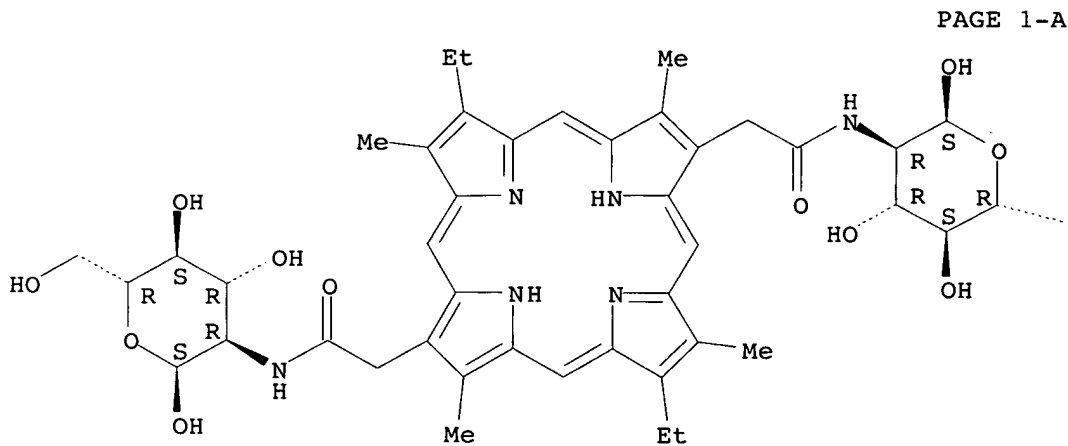
bis(4-nitrophenyl) phosphate hydrolysis)  
 RN 876184-85-9 CAPLUS  
 CN D-Glucitol, 1,1'-[(7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl)bis[(1-oxo-3,1-propanediyl)imino]]bis[1-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



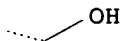
RN 876184-86-0 CAPLUS  
 CN  $\alpha$ -D-Glucopyranose, 2,2'-[(7,17-diethyl-3,8,13,18-tetramethyl-21H,23H-porphine-2,12-diyl)bis[(1-oxo-2,1-ethanediyl)imino]]bis[2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-A

PAGE 1-B

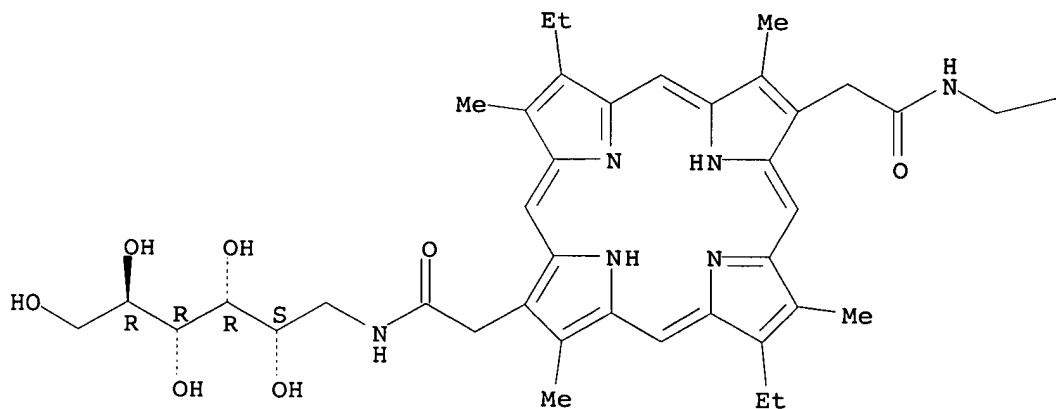


RN 876184-87-1 CAPLUS  
 CN D-Glucitol, 1,1'-[(7,17-diethyl-3,8,13,18-tetramethyl-21H,23H-porphine-

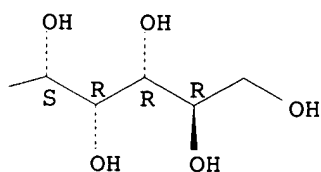
2,12-diyl)bis[(1-oxo-2,1-ethanediyl)imino]]bis[1-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



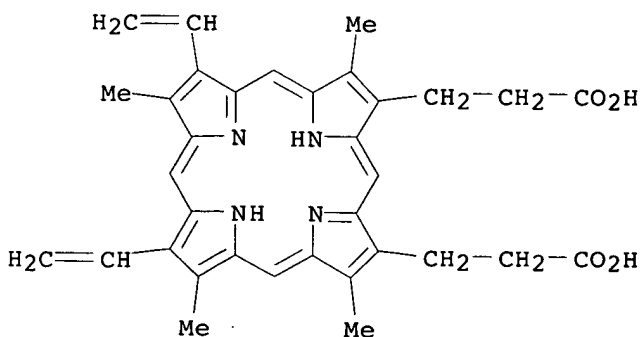
IT 553-12-8 85084-68-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of polyhydroxylated sapphyrins as multisite nonmetallic catalysts for phosphodiester hydrolysis and kinetics of bis(4-nitrophenyl) phosphate hydrolysis)

RN 553-12-8 CAPLUS

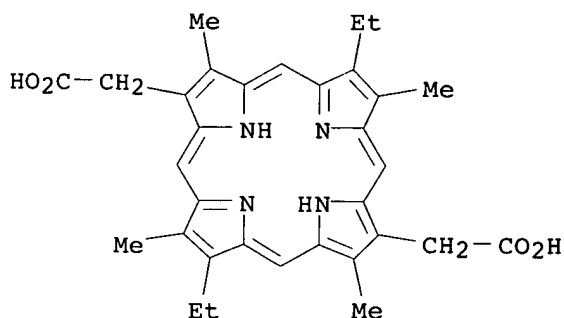
CN 21H,23H-Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl- (9CI) (CA INDEX NAME)



RN 85084-68-0 CAPLUS

CN 21H,23H-Porphine-2,12-diacetic acid, 7,17-diethyl-3,8,13,18-tetramethyl- (9CI) (CA INDEX NAME)





RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:658190 CAPLUS  
DN 137:208156  
TI Metal-containing dendrimers  
IN Burn, Paul Leslie; Christou, Victor; Lo, Shi-Chun; Pillow, Jonathan Nigel  
Gerard; Lupton, John Mark; Samuel, Ifor David William  
PA Isis Innovation Limited, UK  
SO PCT Int. Appl., 77 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002066552	A1	20020829	WO 2002-GB750	20020220
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2438745	A1	20020829	CA 2002-2438745	20020220
	EP 1366113	A1	20031203	EP 2002-700455	20020220
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	CN 1492904	A	20040428	CN 2002-805237	20020220
	JP 2004530254	T	20040930	JP 2002-566264	20020220
	US 2004112151	A1	20040617	US 2004-471490	20040126
	US 2004137263	A1	20040715	US 2004-468716	20040213
PRAI	GB 2001-4175	A	20010220		
	GB 2001-6307	A	20010314		
	GB 2001-6037	A	20010312		
	WO 2002-GB750	W	20020220		
	WO 2002-GB1102	W	20020311		

AB Light-emitting devices are described which comprise  $\geq 1$  layer that contains an organometallic dendrimer with a metal cation as part of its core, the core not comprising a magnesium-chelated porphyrin. Organometallic dendrimers which comprise a metal cation as part of its core and  $\geq 2$  dendrons are described in which  $\geq 1$  of the dendrons is conjugated, the dendrimer is luminescent in the solid state, and the core does not comprise a magnesium-chelated porphyrin. Blends of the organometallic dendrimers and a corresponding nonmetallic dendrimer having the same dendritic structure as that of the organometallic dendrimer are also described. Methods for producing dendrimers are described which entail providing a core by forming a

complex between a metal cation and  $\geq 2$  coordinating groups, at least two of the the groups bearing a reactive functionality; and treating the core thus provided with  $\geq 2$  dendrons which were functionalized to render them reactive towards the reactive functionalities present in the core,  $\geq 1$  of the dendrons being conjugated. Methods for producing dendrimers are also described which entail attaching a coordinating group to each of  $\geq 2$  dendrons; forming a complex between the coordinating groups and a metal cation; and optionally further treating the complex with  $\geq 1$  addnl. coordinating ligands.

IT 223574-14-9

RL: RCT (Reactant); RACT (Reactant or reagent)

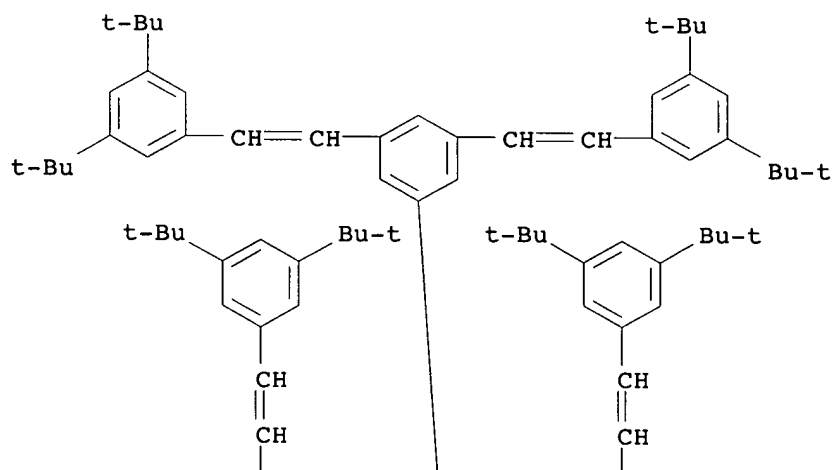
(metal-containing dendrimers and their production and blends containing them and

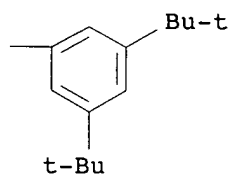
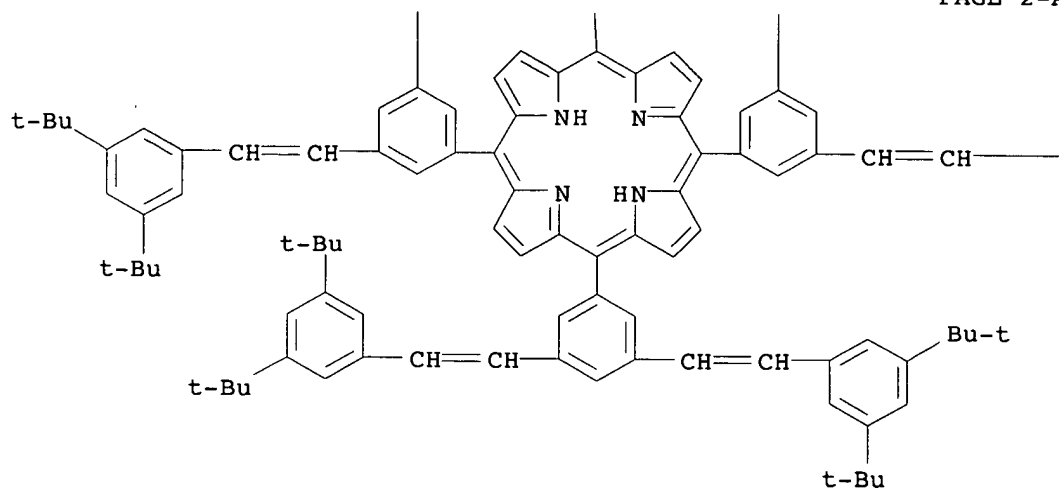
light-emitting devices using them)

RN 223574-14-9 CAPLUS

CN 21H,23H-Porphine, 5,10,15,20-tetrakis[3,5-bis[2-[3,5-bis(1,1-dimethylethyl)phenyl]ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A





RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 10:55:21 ON 03 FEB 2007)

FILE 'REGISTRY' ENTERED AT 10:55:33 ON 03 FEB 2007

L1 STRUCTURE UPLOADED

L2 50 S L1

L3 26701 S L1 FULL

FILE 'CAPLUS' ENTERED AT 10:56:09 ON 03 FEB 2007

L4 11 S L3 AND NONMETALLIC

L5 1 S L4 AND LABEL?

L6 2 S L4 AND (REACTIVE OR FUNCTIONAL) (3A) GROUP?

L7 2 S L6 NOT L5

=> file biosis medline caplus wpids uspatfull

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
34.32	206.63

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-2.34	-2.34

CA SUBSCRIBER PRICE

FILE 'BIOSIS' ENTERED AT 11:07:07 ON 03 FEB 2007

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FILE 'MEDLINE' ENTERED AT 11:07:07 ON 03 FEB 2007

FILE 'CAPLUS' ENTERED AT 11:07:07 ON 03 FEB 2007

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FILE 'WPIDS' ENTERED AT 11:07:07 ON 03 FEB 2007

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FILE 'USPATFULL' ENTERED AT 11:07:07 ON 03 FEB 2007

CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s label? (10a) nonmetallic (4a) porphyrin

L8 10 LABEL? (10A) NONMETALLIC (4A) PORPHYRIN

=> dup rem l8

PROCESSING COMPLETED FOR L8

L9 10 DUP REM L8 (0 DUPLICATES REMOVED)

=> d l9 bib abs 1-10

L9 ANSWER 1 OF 10 USPATFULL on STN

AN 2006:202424 USPATFULL

TI Labeling reagents and labeled targets comprising nonmetallic porphyrins

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbani, Elazar, New York, NY, UNITED STATES

PA Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc., New York, NY, UNITED STATES (U.S. corporation)

PI US 2006172308 A1 20060803

AI US 2004-763088 A1 20040122 (10)

RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING

DT Utility

FS APPLICATION

LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US

CLMN Number of Claims: 19

ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 3541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 2 OF 10 USPATFULL on STN

AN 2005:5243 USPATFULL

TI Novel chemiluminescent reagents

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbani, Elazar, New York, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)

PI US 2005004350 A1 20050106

AI US 2004-764388 A1 20040123 (10)

RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING

DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 17  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3601

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 3 OF 10 USPATFULL on STN  
AN 2004:321700 USPATFULL  
TI Labeling reagents comprising aphenylic analogs of rhodamine dyes  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY (U.S. corporation)  
PI US 2004254355 A1 20041216  
AI US 2004-763076 A1 20040122 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 4545

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 4 OF 10 USPATFULL on STN  
AN 2004:292946 USPATFULL  
TI Heterodimeric dye composition  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabban, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES, 10022 (U.S. corporation)  
PI US 2004230036 A1 20041118  
AI US 2004-764389 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)

LN.CNT 4541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 10 USPATFULL on STN

AN 2004:292164 USPATFULL

TI Novel dye labeling composition

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbani, Elazar, New York, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)

PI US 2004229248 A1 20041118

US 6949659 B2 20050927

AI US 2004-764393 A1 20040123 (10)

RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING

DT Utility

FS APPLICATION

LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc., 527 Madison Avenue, 9th Floor, New York, NY, 10022-4304

CLMN Number of Claims: 4

ECL Exemplary Claim: CLM-1-286

DRWN 15 Drawing Page(s)

LN.CNT 3537

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 10 USPATFULL on STN

AN 2004:260541 USPATFULL

TI Process for preparing novel cyanine dye labeling reagents

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbam, Elazar, New York, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)

PI US 2004203038 A1 20041014

AI US 2004-761906 A1 20040121 (10)

RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING

DT Utility

FS APPLICATION

LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc., 527 Madison Avenue (9th Floor), New York, NY, 10022-4304

CLMN Number of Claims: 15

ECL Exemplary Claim: CLM-1-286

DRWN 15 Drawing Page(s)

LN.CNT 3584

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents

can be usefully applied to protein and nucleic acid probe based assays.  
They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 7 OF 10 USPATFULL on STN  
AN 2004:248291 USPATFULL  
TI Process for detecting the presence or quantity of enzymatic activity in  
a sample  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES, 10022 (U.S.  
corporation)  
PI US 2004192893 A1 20040930  
AI US 2004-764417 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 36  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3665

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and  
processes for preparing labeling reagents. The labeling reagents can  
take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin  
dyes or composite dyes. These labeling reagents are useful for labeling  
probes or targets, including nucleic acids and proteins. These reagents  
can be usefully applied to protein and nucleic acid probe based assays.  
They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 8 OF 10 USPATFULL on STN  
AN 2004:228200 USPATFULL  
TI Process for detecting the presence or quantity of enzymatic activity in  
a sample  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)  
PI US 2004176586 A1 20040909  
US 7163796 B2 20070116  
AI US 2004-764418 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 4543

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and  
processes for preparing labeling reagents. The labeling reagents can  
take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin  
dyes or composite dyes. These labeling reagents are useful for labeling  
probes or targets, including nucleic acids and proteins. These reagents  
can be usefully applied to protein and nucleic acid probe based assays.  
They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 9 OF 10 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN  
AN 2004-055097 [06] WPIDS  
CR 2003-723476  
DNC C2004-022436 [06]  
DNN N2004-044609 [06]  
TI Labeling reagent useful for e.g. determining the amount of nucleic acid in a sample comprises a marker moiety and a reactive group covalently linked together  
DC B04; D16; E24; S03  
IN RABBAM E; RABBAN E; RABBANI E; STAVRIANOPOULOS J G  
PA (ENZO-N) ENZO LIFE SCI INC; (RABB-I) RABBANI E; (STAV-I) STAVRIANOPOULOS J G  
CYC 34  
PIA EP 1348713 A2 20031001 (200406)\* EN 102[15]  
CA 2421552 A1 20030912 (200406) EN  
JP 2004004048 A 20040108 (200406) JA 245  
US 20030225247 A1 20031204 (200406) EN  
US 20040176586 A1 20040909 (200459) EN  
US 20040192893 A1 20040930 (200465) EN  
US 20040203038 A1 20041014 (200468) EN  
US 20040229248 A1 20041118 (200477) EN  
US 20040230036 A1 20041118 (200477) EN  
US 20040254355 A1 20041216 (200482) EN  
US 20050004350 A1 20050106 (200504) EN  
US 6949659 B2 20050927 (200563) EN  
US 20060172308 A1 20060803 (200651) EN  
ADT EP 1348713 A2 EP 2003-4894 20030306; US 20030225247 A1 US 2002-96075 20020312; US 20040176586 A1 Div Ex US 2002-96075 20020312; US 20040192893 A1 Div Ex US 2002-96075 20020312; US 20040203038 A1 Div Ex US 2002-96075 20020312; US 20040230036 A1 Div Ex US 2002-96075 20020312; US 20040229248 A1 Div Ex US 2002-96075 20020312; US 20040254355 A1 Div Ex US 2002-96075 20020312; US 20050004350 A1 Div Ex US 2002-96075 20020312; US 6949659 B2 Cont of US 2002-96075 20020312; CA 2421552 A1 CA 2003-2421552 20030311; JP 2004004048 A JP 2003-114988 20030311; US 20040203038 A1 US 2004-761906 20040121; US 20040254355 A1 US 2004-763076 20040122; US 20050004350 A1 US 2004-764388 20040123; US 20040230036 A1 US 2004-764389 20040123; US 20040229248 A1 US 2004-764393 20040123; US 6949659 B2 US 2004-764393 20040123; US 20040192893 A1 US 2004-764417 20040123; US 20040176586 A1 US 2004-764418 20040123; US 20060172308 A1 Div Ex US 2002-96075 20020312; US 20060172308 A1 US 2004-763088 20040122  
PRAI US 2002-96075 20020312  
US 2004-761906 20040121  
US 2004-763076 20040122  
US 2004-764388 20040123  
US 2004-764389 20040123  
US 2004-764393 20040123  
US 2004-764417 20040123  
US 2004-764418 20040123  
US 2004-763088 20040122  
AN 2004-055097 [06] WPIDS  
CR 2003-723476  
AB EP 1348713 A2 UPAB: 20060120  
NOVELTY - A labeling reagent comprises a marker moiety and a reactive group covalently linked together.  
DETAILED DESCRIPTION - A labeling reagent of formula (MR) (i) comprises a marker moiety and a reactive group covalently linked together.  
M = marker moiety comprising ligand and/or dye; and  
R = reactive group capable of forming a carbon-carbon linkage with the target.  
INDEPENDENT CLAIMS are included for the following:  
(a) a labeled target labeled by reacting target with (i) to form a carbon-carbon linkage between the target and (i);  
(b) preparation of cyanine dye labeling reagent of formula (I)



involving forming a mixture comprising intermediate compounds of formulae (Ia) and (Ib), and linking reagents to link (Ia) and (Ib);

(c) a labeled nucleotide comprising an aphenylic analog of a rhodamine dye, which is attached directly to the nucleotide or indirectly through a linker;

(d) a heterodimeric dye composition (C1) comprising a dye (a) containing a phenanthridinium moiety and another dye (b) different from (a) and attached through the phenyl ring of the phenanthridinium moiety;

(e) determining the amount of nucleic acid in a sample involving: 1a) forming a mixture of the sample; a dye comprising two phenanthridinium moieties linked through a phenyl group in each of the two moieties, or a dye of formula (IV) - (VII), or (C1); and reagents for carrying out dye binding, hybridization and/or strand extension to produce a complex comprising the dye and any nucleic acid present in the sample; 2a) illuminating the mixture formed at wavelength below 400 nanometer (nm); and 3a) measuring fluorescent emission from the illuminated mixture, the emission being proportional to the quantity of the nucleic acid present in the sample;

(f) a composition comprising at least one of (IV) - (VII);

(g) a chemiluminescent reagent of formula (VIII) or (IX);

(h) detecting the presence or quantity of enzymatic activity in a sample involving: 1b) either forming a mixture of the sample, (VIII) or (IX) and reagents and buffers for carrying out chemiluminescent reactions; or contacting (VIII) or (IX) and the reagents and buffers with the sample; 2b) enzymatically converting (VIII) or (IX) into an unstable light-emitting dioxetane form; and 3b) measuring the quantity of light generated by the enzymatic conversion; and

(i) a dye composition comprising a compound of formula Rc-Fluorescent Dye.

Q = (poly)cycloalkyl;

Z = H, aralkyl, alkaryl, (hetero)alkyl, (hetero)aryl, cycloalkyl or cycloheteroalkyl;

R1a and R2a = chemical moieties;

Ra = chemical linker;

Rb = substrate for non-cleaving enzymatic process;

Rc = unsaturated aliphatic groups, unsaturated heterocyclic groups and/or aromatic groups.

R1a is enzymatically converted into R1b, which comprises a chemical reactive group G1. R2a is attached to the cyclic ring through an oxygen atom and comprises a chemical reactive group G2, which reacts with the G1 to convert the dioxetane to an unstable light-emitting dioxetane form. The product of enzymatic process leads to further chemical rearrangement that generate an unstable light emitting dioxetane form. Rc is capable of providing a conjugated system or an electron delocalized system with the fluorescent dye.

USE - For labeling a target; for determining the amount of nucleic acid in a sample; and for detecting the presence or quantity of enzymatic activity in a sample (claimed); and in protein and nucleic acid probe based assays.

L9 ANSWER 10 OF 10 USPATFULL on STN

AN 2003:319498 USPATFULL

TI Labeling reagents and labeled targets, target labeling processes and other processes for using same in nucleic acid determinations and analyses

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES

PI US 2003225247 A1 20031204

US 7166478 B2 20070123

AI US 2002-96075 A1 20020312 (10)

DT Utility

FS APPLICATION

LREP ENZO LIFE SCIENCES, INC., c/o ENZO BIOCHEM, INC., 527 Madison Avenue,  
9th Floor, New York, NY, 10022

CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 4499

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 10:55:21 ON 03 FEB 2007)

FILE 'REGISTRY' ENTERED AT 10:55:33 ON 03 FEB 2007

L1 STRUCTURE UPLOADED

L2 50 S L1

L3 26701 S L1 FULL

FILE 'CAPLUS' ENTERED AT 10:56:09 ON 03 FEB 2007

L4 11 S L3 AND NONMETALLIC

L5 1 S L4 AND LABEL?

L6 2 S L4 AND (REACTIVE OR FUNCTIONAL) (3A) GROUP?

L7 2 S L6 NOT L5

FILE 'BIOSIS, MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 11:07:07 ON 03 FEB 2007

L8 10 S LABEL? (10A) NONMETALLIC (4A) PORPHYRIN

L9 10 DUP REM L8 (0 DUPLICATES REMOVED)

=> s nonmetall? (5a) porphyrin

L10 25 NONMETALL? (5A) PORPHYRIN

=> s l10 not l9

L11 15 L10 NOT L9

=> s l11 and label?

L12 7 L11 AND LABEL?

=> dup rem l12

PROCESSING COMPLETED FOR L12

L13 7 DUP REM L12 (0 DUPLICATES REMOVED)

=> s l13 and reactive (4a) group?

L14 3 L13 AND REACTIVE (4A) GROUP?

=> d l14 bib abs 1-3

L14 ANSWER 1 OF 3 USPATFULL on STN

AN 2002:60993 USPATFULL

TI NOVEL 10,10'-SUBSTITUTED-9,9'-BIACRIDINE LUMINESCENT MOLECULES AND THEIR PREPARATION

IN KATSILOMETES, GEORGE C., LAVA HOT SPRING, ID, UNITED STATES

BREMMER, MARTIN L., ROCKFORD, IL, UNITED STATES

HERMANSON, GREG T., LOVES PARK, IL, UNITED STATES

STACK, JEFFREY G., ROSCOE, IL, UNITED STATES

FEATHER-HENIGAN, KELLI D., ROCKFORD, IL, UNITED STATES

HINES, KIMBERLY, CRYSTAL LAKE, IL, UNITED STATES

PI US 2002034828 A1 20020321  
AI US 1999-241513 A1 19990201 (9)  
DT Utility  
FS APPLICATION  
LREP MARK A. LITMAN & ASSOCIATES, P.A., YORK BUSINESS CENTER, SUITE 205, 3209  
WEST 76TH STREET, EDINA, MN, 55435  
CLMN Number of Claims: 54  
ECL Exemplary Claim: 1  
DRWN 3 Drawing Page(s)  
LN.CNT 2416

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel symmetrical and asymmetrical 10,10'-substituted-9,9'-biacridines and the synthesis of such symmetrical and asymmetrical 10,10'-substituted-9,9'-biacridine molecules and their derivatives is disclosed. These molecules are shown to produce light by chemiluminescence in the presence of signal solutions. These symmetrical or asymmetrical 10,10'-substituted-9,9'-biacridines are used alone or attached to haptens or macromolecules and are utilized as labels in the preparation of chemiluminescent, homogeneous or heterogeneous assays. They are also used in conjunction with other chemiluminescent label molecules to produce multiple analyte chemiluminescent assays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 2 OF 3 USPATFULL on STN  
AN 1999:15693 USPATFULL  
TI Preparation of derivatized 10,10'-substituted-9,9'-biacridine luminescent molecules and signal solutions  
IN Katsilometes, George W., 3660 B Village Dr., Carlsbad, CA, United States 92008  
Ho, Pak T., San Mateo, CA, United States  
PA Katsilometes, George W., Lava Hot Springs, ID, United States (U.S. individual)  
PI US 5866335 19990202  
AI US 1996-767288 19961216 (8)  
RLI Continuation of Ser. No. US 1994-265481, filed on 24 Jun 1994, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Green, Lora M.  
LREP Smith, Karen S.Flehr Hohbach Test Albritton & Herbert LLP  
CLMN Number of Claims: 31  
ECL Exemplary Claim: 27  
DRWN 6 Drawing Figure(s); 4 Drawing Page(s)  
LN.CNT 1176

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The synthesis of 10,10'-substituted-9,9'-biacridine molecules and their derivatives is disclosed. These molecules are shown to catalyze the production of light by chemiluminescence in the presence of a signal solution having at a pH from about 10.0 to about 14.0, at a concentration effective for producing a chemiluminescent signal, a chelating agent, a sulfoxide, a reducing sugar, an oxidant or combination of oxidants, an alcohol and aqueous sodium tetraborate. These 10,10'-substituted-9,9'-biacridines are used alone or attached to haptens or macromolecules and are utilized as labels in the preparation of chemiluminescent, homogeneous or heterogeneous assays. They are also used in conjunction with other chemiluminescent label molecules to produce multiple analyte chemiluminescent assays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 3 OF 3 USPATFULL on STN

AN 94:73202 USPATFULL  
TI Use of nonmetallic tetrapyrrole molecules and novel signal solutions in  
chemiluminescent reactions and assays  
IN Katsilometes, George W., Davis, CA, United States  
PA Monitor Diagnostics, Inc., Davis, CA, United States (U.S. corporation)  
PI US 5340714 19940823  
AI US 1992-880714 19920508 (7)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Scheiner, Toni R.; Assistant Examiner: Green, Lora M.  
LREP Flehr, Hohbach, Test, Albritton & Herbert  
CLMN Number of Claims: 32  
ECL Exemplary Claim: 5  
DRWN 20 Drawing Figure(s); 17 Drawing Page(s)  
LN.CNT 1792

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Nonmetallic tetrapyrrole molecules are shown to catalyze the production of light by chemiluminescence in the presence of a signal solution at a pH from about 10.0 to about 14.0, having an appropriate oxidant or combination of oxidants and a luminescent reactant. The addition of an electron transport facilitator, a surfactant, a carbohydrate, and a chelating agent to the signal solution increases the output of light. These tetrapyrrole molecules are used alone or attached to haptens or macromolecules and are utilized as labels in the preparation of chemiluminescent, homogeneous or heterogeneous assays. They are also used in conjunction with other chemiluminescent label molecules to produce multiple analyte chemiluminescent assays. A chemiluminescent signal solution which comprises at a pH ranging from about 10.0 to about 14.0 trans, trans-5-(4-Nitrophenyl)-2,4-pentadienal, sodium di-2-ethylhexyl sulfosuccinate, glucose, benzyltrimethylammonium hydroxide, cumene hydroperoxide, trisodium para periodate, potassium superoxide and EDTA with or without a luminescent reactant is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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